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## (54) HIGHLY HARD SINTERED COMPACT FOR TOOL AND ITS PRODUCTION

(57)Abstract:

PURPOSE: To provide a highly hard sintered compact for a tool having low specific resistance and capable of performing electrical-discharge machining even in the constituent region suitable for cutting of cast iron by including a large amount of non-conductive material comprising boron nitride of cubic system and aluminum oxide and/or aluminum nitride.

CONSTITUTION: This highly hard sintered compact for tools contains  $\geq 85$ vol.% a non-conductive material comprising boron nitride of cubic system and aluminum oxide and/or aluminum nitride, and the remainders are a conductive material consisting mainly of titanium nitride and inevitable impurities. The boron nitride of cubic system is 30-80vol.% of the total sintered compact and specific resistance of the sintered compact is  $\leq 10\Omega\cdot\text{cm}$ . This compact has a low specific resistance and readily able to be electrically discharge machined in contrast to the conventional sintered compact highly containing non-conductive material, having high specific resistance, impossible of an electrically discharge machining, or practically unusable with generating exfoliation or fine defects even in a case of possible.

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